Influenza (flu) is associated with severe morbidity and mortality among hematopoietic stem cell transplant (HSCT) recipients. We performed respiratory viral infection surveillance in pediatric HSCT recipients during an ongoing flu vaccine trial since September 2016.

To describe the respiratory viral frequency detection in our cohort who participated in year three of the vaccine study.

- Pediatric HSCT recipients aged 3-18 years.
- Phase-II, nine-center, randomized-controlled, double-blinded immunogenicity/safety clinical trial comparing two doses of either high-dose trivalent inactivated flu vaccine or standard dose quadrivalent inactivated flu vaccine over three years (2016-2019).
- Active flu surveillance was conducted during site-specific flu seasons and mid-turbinate nasal swabs were collected based on influenza-like illness (ILI); If study visits occurred during flu season, swabs were collected regardless of symptoms.
- In study year three only, swabs were also collected for ILI outside flu-season.
- Specimens were tested for 20 targets using the Luminex NxTAG Respiratory Pathogen Panel®.
- Testing results for swabs collected from subjects enrolled during year three of the vaccine study (9/2018 to 10/2019) were included in this analysis.
- The study is ongoing and remains blinded to vaccine type.

Breakthrough flu was detected in 7% of the pediatric HSCT recipients in our cohort despite flu vaccination.

All flu subjects were symptomatic, but most cases were mild.

Detection of non-flu viruses in asymptomatic HSCT flu vaccine recipients warrants further investigation to ascertain clinical significance.

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